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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/890,907 | 11/16/2001 | Richard F. Fibiger | 44114 | 9488 |
| 22515 | 7590 | 08/20/2003 | | 12 |
| THE DOW CHEMICAL COMPANY INTELLECTUAL PROPERTY SECTION 2301 N BRAZOSPORT BLVD FREEPORT, TX 77541-3257 | | | EXAMINER | |
| | | | KUHNS, ALLAN R | |
| | | ART UNIT | PAPER NUMBER | |
| | | 1732 | | |

DATE MAILED: 08/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

| | |
|-------------------------------|--------------------------------|
| Application No. 09/890,907 | Applicant(s) FIBIGER ET AL, |
| Examiner KUHN | Group Art Unit 1732 |

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

Responsive to communication(s) filed on

JULY 17, 2003

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

Claim(s) 1-5

is/are pending in the application.

Of the above claim(s) 2 AND 5

is/are withdrawn from consideration.

Claim(s) _____

is/are allowed.

Claim(s) 1 AND 3-4

is/are rejected.

Claim(s) _____

is/are objected to.

Claim(s) _____

are subject to restriction or election requirement

Application Papers

The proposed drawing correction, filed on _____ is approved disapproved.

The drawing(s) filed on _____ is/are objected to by the Examiner

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

All Some* None of the:

Certified copies of the priority documents have been received.

Certified copies of the priority documents have been received in Application No. _____.

Copies of the certified copies of the priority documents have been received

in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____.

Attachment(s)

Information Disclosure Statement(s), PTO-1449, Paper No(s). 5

Interview Summary, PTO-413

Notice of Reference(s) Cited, PTO-892

Notice of Informal Patent Application, PTO-152

Notice of Draftsperson's Patent Drawing Review, PTO-948

Other _____

Office Action Summary

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1. Applicant's election without traverse of claims 1 and 3-4 in Paper No. 11 is acknowledged.
2. Claims 2 and 5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 11.
3. It is requested that the actual steps conducted in the "SCORIM process" be recited in the claims since, as the claims are now constructed, one of ordinary skill in the art would not be able to ascertain what this process represents by simply consulting the instant specification.
4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1 and 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinnavaia et al. (5,801,216). Pinnavaia et al. disclose or suggest the basic claimed method of making a nanocomposite article including dispersing a multi-layered silicate material within a polymer such that the polymer has dispersed therein single layers of silicate material, double layers of silicate material, triple layers of silicate material, four layers of silicate material, five layers of silicate material and more than five layers of silicate material, the volume percent of the on, two, three, four and five layers of silicate material being greater than the volume percent of the more than five layers of silicate material, the process including forming the nanocomposite

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article by causing the polymer to align the planes of the silicate material such that more than half the planes have the same orientation within thirty degrees. Note Figures 6A and 6B and column 11, lines 25-35. It would have been obvious to one of ordinary skill in the art to cause the polymer to flow in order to align the silicate planes, and such is suggested by Pinnavaia et al. at column 11, lines 27-28 when it is stated that a strain should be applied to the surface of the resin.

Pinnavaia et al. teach silicate loading within the ranges of claims 3-4 at column 4, line 23.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is (703) 308-3462. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni , can be reached on (703) 305-5493. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Allan R. Kuhns
ALLAN R. KUHNS
PRIMARY EXAMINER AU 1732

8-15-03